

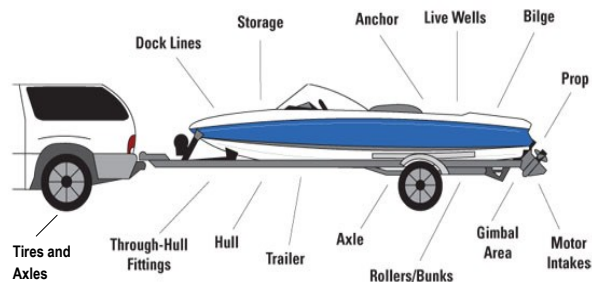
## What can be done?

In many cases, invasive species will be with us indefinitely. It is crucial therefore that we all work together to help limit the spread of these species to other non-invaded bodies of water. **Please:**

- Keep your watercraft clean when not in use.
- Remove mud and vegetation from boats and trailers.
- Use artificial lures. Minnows, roe and chum are prohibited in the park to keep out VHS! Leeches and worms are approved.
- Dispose of aquarium plants and other hobby-related species in the trash. Do not introduce non-native species to your local waters!
- Boots and waders should be allowed to thoroughly dry between uses or washed with 140 degree water for at least one minute.



Before launching and before leaving...  
**Inspect everything!**



[www.oregon.gov](http://www.oregon.gov)

## How do aquatic invasives impact your park experience?

**Do you like a lake trout dinner?** So do sea lamprey!

This aggressive invader attacks and destroys lake trout and other sport fish in Lake Michigan, Lake Huron and Lake Superior. Active restocking efforts are slowly rebuilding sport fish populations, but the sea lamprey is here to stay. If you catch a fish with a sea lamprey attached, do not put the lamprey back in the water!

**Is your rod and reel catching cottony fuzz?** That fluff on your line may be hundreds of spiny water fleas! These shrimp-like invertebrates have sharp spines so many fish avoid eating them. They are able to survive and reproduce more effectively than native invertebrates, which they eventually displace.

**Do you enjoy casting your line into a pristine inland lake?** Many park visitors do! But what if you mostly caught only one kind of fish? The round goby is an aggressive bait stealer, and it also eats eggs and small fry of native species. Round goby eggs are more likely to survive and hatch because the male guards the eggs. Lakes infested with round gobies are not much fun for fishing. Help us keep the round goby out of Pictured Rocks National Lakeshore!

### Pictured Rocks National Lakeshore

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Pictured Rocks National Lakeshore

## Aquatic Invaders at Pictured Rocks National Lakeshore



Pictured Rocks National Lakeshore contains many pristine lakes and streams that are threatened by unwelcome residents—invasive aquatic plants and animals. These non-native invaders can negatively impact wildlife habitat, upset the food chain and out-compete native species. Both Lake Superior and several of the park's inland wetlands have already been affected.

Learn how you can help prevent the further spread of these harmful organisms into the park's precious water resources.

## Invaders on the move!

Invasive aquatic species, whether tiny invertebrates or large aggressive fish, all share one thing in common: they are non-native pests that do not belong in this ecosystem. They are also notorious *hitchhikers*, spreading from lake to lake by boat, fishing equipment and expelled bilge water. Some of these species are already infesting park waters and others are moving closer each year. Park staff work diligently to control known populations of invasive species and prevent the arrival of new ones. Prevention is the key! Once established, invasive species are very hard to eradicate.

### Ruffe

The ruffe (rough) was introduced into Lake Superior by ballast water from European trade ships. This aggressive fish can lay up to 20,000 eggs a year. Watch out for its spiny dorsal fin. Ruffe compete for food and resources with native yellow perch.



### Asiatic Clam

A fast breeder, this mollusk consumes resources needed by native clams. It can also choke out native species by growing on their shells. Felt-bottomed waders used by fishermen are a primary carrier of Asiatic clam egg masses. Always give waders 3 - 5 days to dry out and look for jelly-like masses attached to the bottom. The Asiatic clam has not yet been found at the park.



### Sea Lamprey



The sea lamprey is a parasitic ocean fish that feeds only on the blood and fluids of large game fish, such as lake trout. Sea lampreys migrated from the Atlantic Ocean into the Great Lakes after completion of the Welland Canal. Current management includes chemically treating the streams where sea lamprey spawn and using pheromone traps to catch adults.

### Round Goby

This bait-stealing menace arrived as a stowaway aboard European trade ships. Females lay many eggs, which the males guard. These bottom-dwellers easily outcompete native species, take over spawning habitat and alter the food web. The round goby has not yet been found at the park.



### Eurasian Water Milfoil



already growing at Sand Point. **Please take care not to introduce it to inland waters!**

### Spiny Water Flea

These tiny invasive invertebrates have stiff spines that make them unpalatable for small fry and some larger fishes. They outcompete native invertebrates and may decrease fish populations. Water fleas are transported by contaminated fishing gear and have been found in Beaver Lake and Grand Sable Lake. A cottony mass attached to your fishing line could be spiny or fish hook water fleas. Don't introduce them to more park wetlands!



### Purple Loosestrife



This wetland invader rapidly displaces native plants. Purple loosestrife grows well from seed and can quickly reduce an open wetland to a dense mat of blooms. A mature plant can produce up to three million seeds a year! Purple loosestrife was removed from the park ten years ago and has not returned. Help us keep this unwanted guest OUT!

### Viral Hemorrhagic Septicemia (VHS)

VHS, a virus found in ocean fish, was introduced to the Great Lakes in ballast water from ocean vessels. It affects many species of fish and negatively impacts watersheds. Do not use live bait while fishing, as this spreads the disease. VHS has not yet been found at the park.

